

Date: Thursday, 10/11/2007 2:55:19 PM  
User: Kim Johnston

## Process Sheet

Customer : CU-DAR001 Dart Helicopters Services  
Job Number : 35141-2  
Estimate Number : 12181  
P.O. Number : N/A  
This Issue : 10/11/2007 S.O. No. : N/A  
Prsht Rev. : NC  
First Issue : N/A Type : PURCHASED PARTS  
Previous Run : 27012  
Written By :  
Checked & Approved By :  
Comment : est rev A 06.02.06 new issue EC

Drawing Name : SHUT-OFF VALVE SHAFT  
Part Number : D34691  
Drawing Number : D3469 REV.A1  
Project Number : N/A  
Drawing Revision : A1  
Material : N/A  
Due Date : 10/30/2007 Qty: 6 Um: Each

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description:

1.0 M304S26GA 304/316 0.018 SHEET



Comment: Qty.: 0.8259 sf(s)/Unit Total: 6.6074 sf(s)

AISI 304/316 0.018 SHEET batch: M105490

mf 07-10-19

2.0 SHEAR SHEAR



Comment: SHEAR

Cut flat pattern per dwg D3469 & Deburr if nessary

mf 07-10-18

3.0 SMALL FAB 1 SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

1- Drill holes and deburr as per dwg D3469

2-Roll sheet as per dwg D3469

3-Spot weld as per dwg D3469

4-Roll Bead as per dwg D3469

mf 07-11-19

mf 07-10-22

4.0 QC9 VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

SB 07/11/19

5.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

SB 07/11/19

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
07/10/22	<del>2</del> 3	Split w/b	SS	07/10/22	6		

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☒ No ☐ DQA: DD Date: 07/11/20  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHUT-OFF VALVE SHAFT

Job Number: 35141

Part Number: D34691

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: GA

SB 07/11/19

7.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

20/11/20

Job Completion



u 07-11-20

*Handwritten signature*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

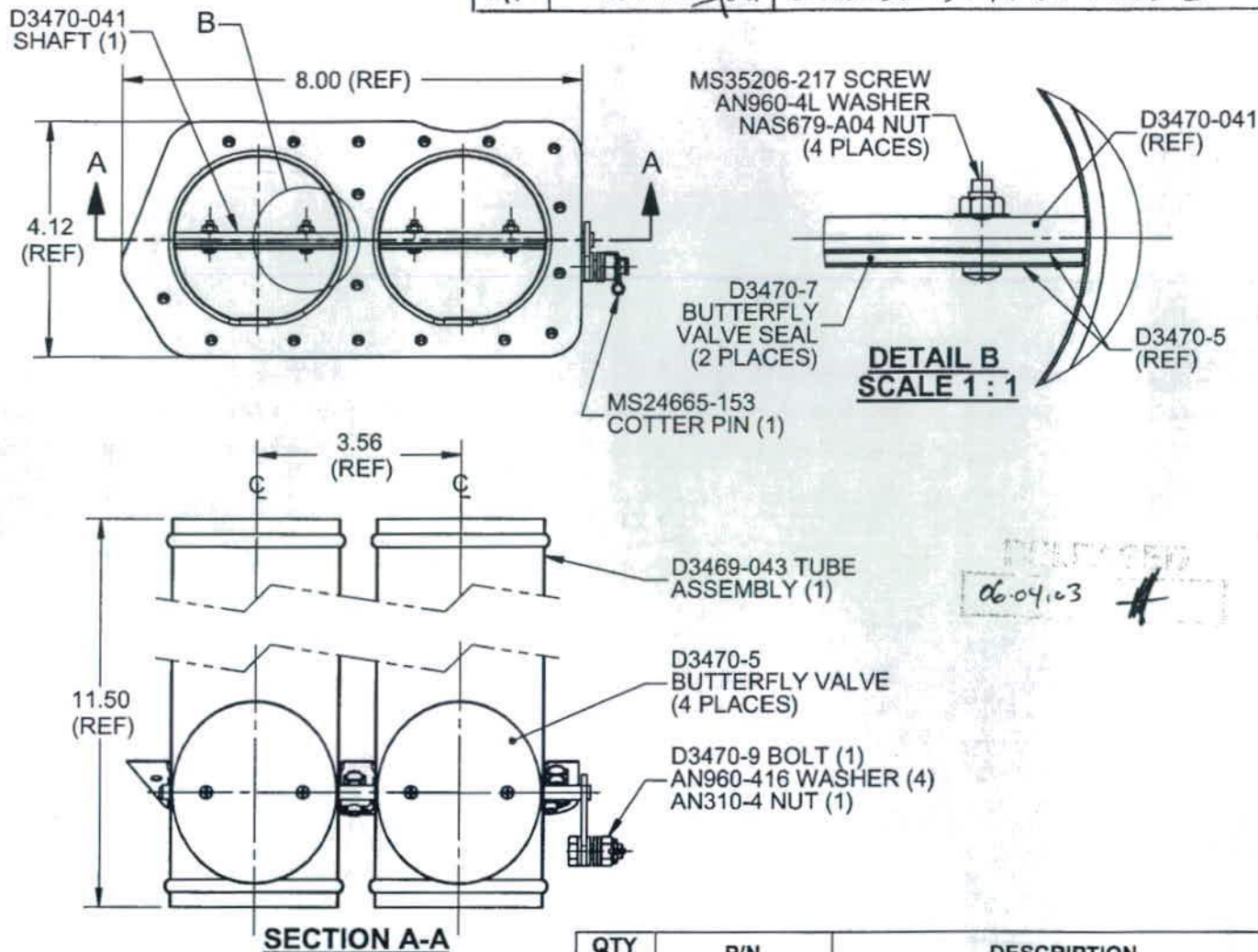
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



**DART**

DESIGN <i>B</i>	DRAWN BY <i>B</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>H</i>	APPROVED <i>H</i>	DRAWING NO. D3469	REV. A SHEET 1 OF 5
DATE 05.12.12	TITLE SHUT-OFF VALVE ASS'Y		SCALE 1:3
A	05.12.12	NEW ISSUE	
A1	06.04.20	CORRECTED BOM. on PAGE 2	

**D3469-041 SHUT-OFF VALVE ASS'Y****NOTES:**

- 1) IDENTIFY WITH DART P/N D3469-041 USING FINE POINT PERMANENT INK MARKER
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.010

QTY -041	P/N	DESCRIPTION
X	D3469-041	SHUT-OFF VALVE ASSEMBLY
1	D3469-043	TUBE ASSEMBLY
1	D3470-041	SHUT-OFF VALVE SHAFT
4	D3470-5	BUTTERFLY VALVE
2	D3470-7	BUTTERFLY VALVE SEAL
1	D3470-9	BOLT
1	AN310-4	NUT
4	AN960-4L	WASHER
4	AN960-416	WASHER
1	MS24665-153	COTTER PIN
4	MS35206-217	SCREW
4	NAS679-A04	NUT

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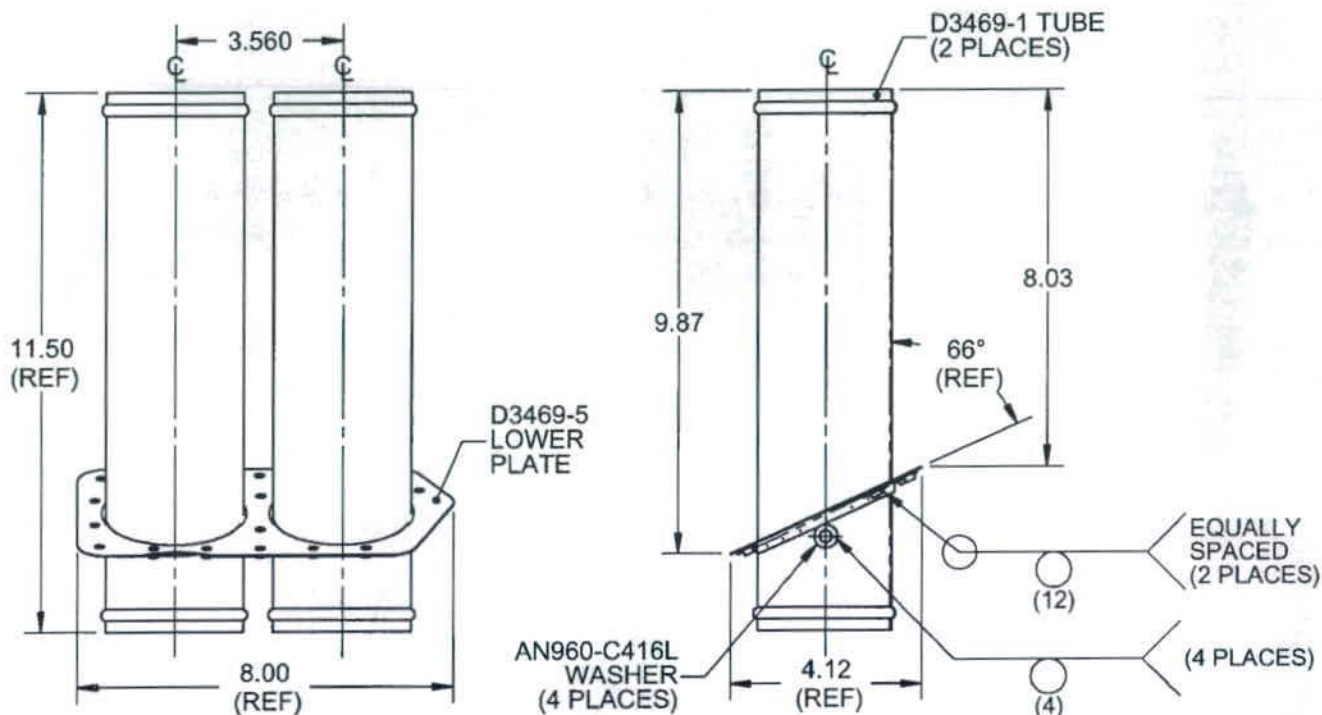
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DATE 05.12.12	TITLE SHUT-OFF VALVE ASS'Y		SCALE 1:4

06.04.03



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WORK ORDER  
NO. 35141

### D3469-043 TUBE ASSEMBLY

#### NOTES:

- 1) SPOT WELD PER DART QSI 004
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.010

QTY -043	P/N	DESCRIPTION
X	D3469-043	TUBE ASSEMBLY
2	D3469-1	TUBE
1	D3469-5	LOWER PLATE
4	D3470-5	PLATE VALVE
4	AN960-C416L	WASHER

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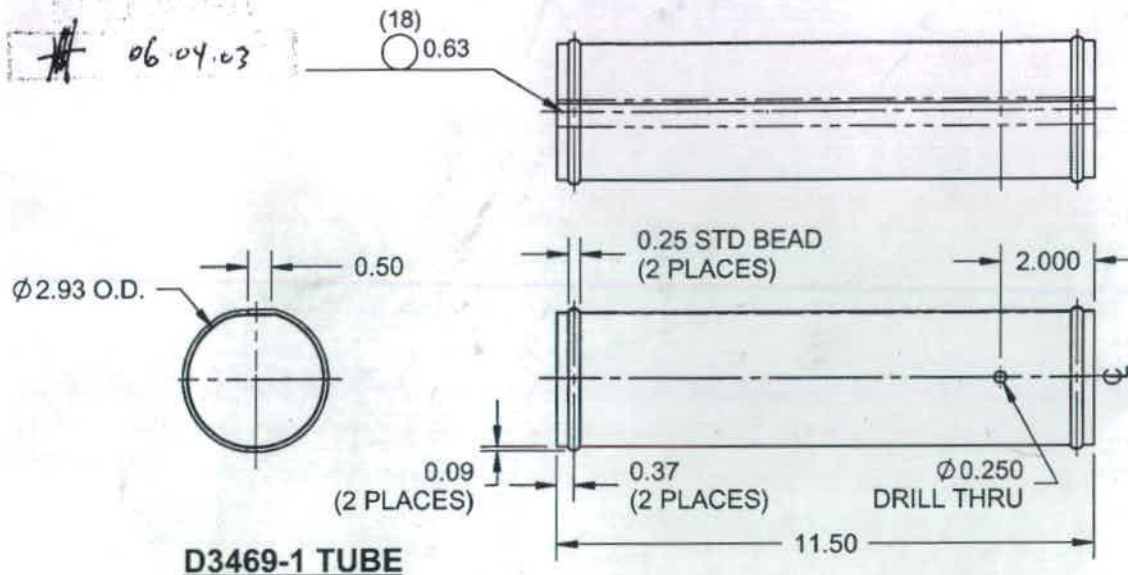








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DATE 05.12.12		TITLE SHUT-OFF VALVE ASS'Y	SCALE 1:4



### **D3469-1F TUBE FLAT PATTERN**

#### **NOTES:**

- 1) MATERIAL: AISI 304/316 SS SHEET PER MIL-S-5019 (ANNEALED) 2B FINISH  
26 GAUGE SS (0.018 THICK)  
(REF. DART SPEC. M304S26GA)
- 2) SPOT WELD PER DART QSI 004
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.010

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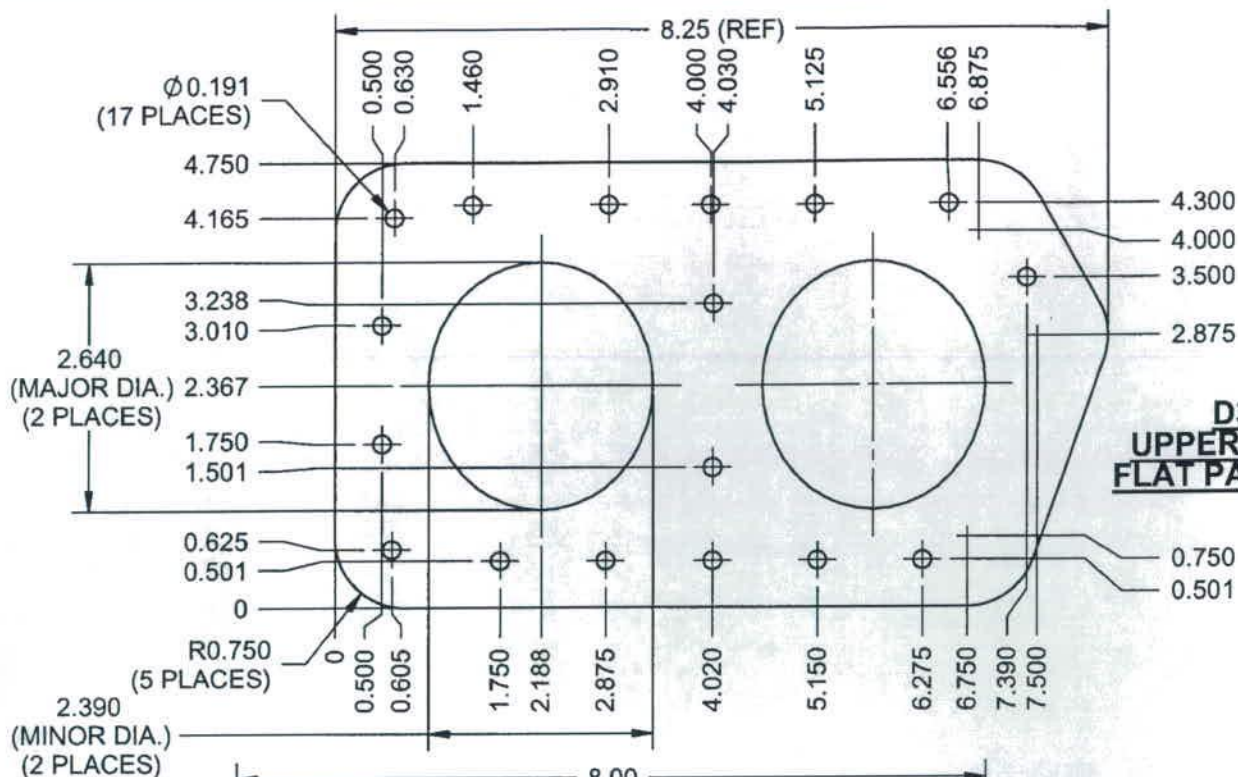
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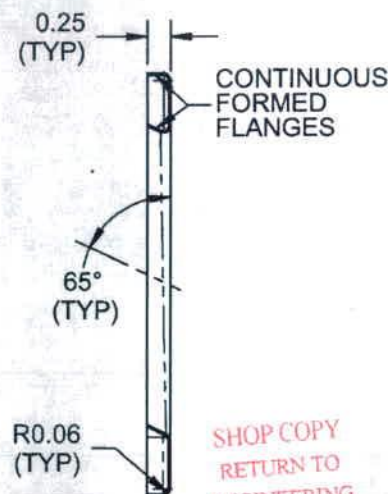
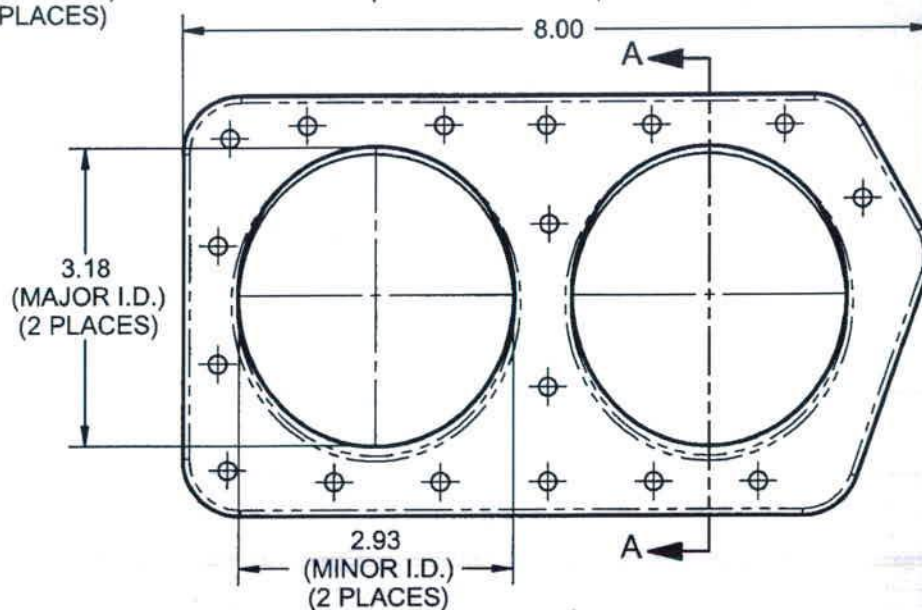




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DATE 05.12.12		TITLE SHUT-OFF VALVE ASS'Y	SCALE 1:2



**D3469-3F  
UPPER PLATE  
FLAT PATTERN**



**SECTION A-A**  
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WORK ORDER  
NO. 35141

### D3469-3 UPPER PLATE BENDING DETAIL

#### NOTES:

- 1) MATERIAL: AISI 304/316 SS SHEET PER MIL-S-5019 (ANNEALED) 2B FINISH  
26 GAUGE SS (0.018 THICK) (REF. DART SPEC. M304S26GA)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) FINISH: NONE
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.010

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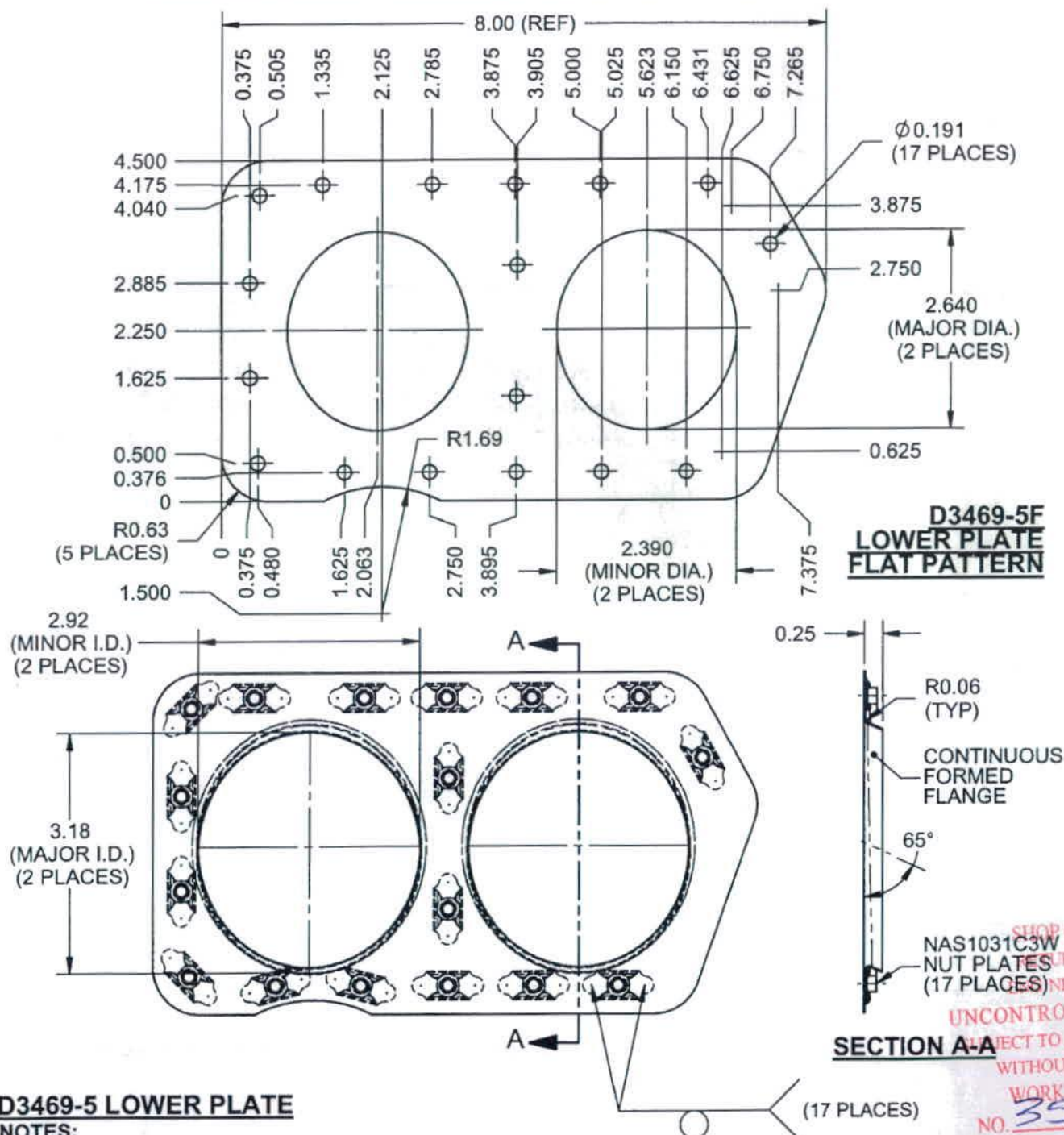
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DATE <b>05.12.12</b>		TITLE <b>SHUT-OFF VALVE ASS'Y</b>	SCALE 1:2

**D3469-5 LOWER PLATE****NOTES:**

- 1) MATERIAL: AISI 304/316 SS SHEET PER MIL-S-5019 (ANNEALED) 2B FINISH 26 GAUGE SS (0.018 THICK) (REF. DART SPEC. M304S26GA)
- 2) SPOT WELD NUT PLATES PER DART QSI 004
- 3) FINISH: NONE
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) BREAK ALL SHARP EDGES 0.005 TO 0.010

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**SPOT WELD TEST RECORD**  
**AMS-W-6858A**  
**CLASS 'C'**

**TEST NO#:** 41

**EMPLOYEE:** Melanie Fauteux

**PART NUMBER:** D3469-1

**JOB NUMBER:** 35141

**MATERIAL TYPE:** 304L

**MATERIAL THICKNESS:** .018

**GROUP SPECIFICATION**



Group 1: Aluminum & magnesium



Group 2: Iron; nickel; cobalt



Group 3: Titanium SS

**TEST RESULTS**

	PASS	FAIL	
VISUAL:	[ / ]	[   ]	
PENETRATION:	[ / ]	[   ]	
PULL STRENGTH:	[ / ]	[   ]	PSI Reading: _____

Qualified in accordance with standard AMS-W-6858A and QSI 004 (ref: 4.3)

**DATE OF TEST COUPON:** 07/11/19  
**QUALIFIER:** SB

